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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/561,966

12/22/2005

Kunihiro Kakihara

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EXAMINER

LEONG, NATHAN T

ART UNIT

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1792

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/561,966	<b>Applicant(s)</b> KAKIHARA ET AL.	
	<b>Examiner</b> NATHAN LEONG	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,8,9 and 11-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,8,9 and 11-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/22/2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 3, 4, and 5 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5, 6, and 3, respectively, of copending Application No. 10/562007. Although the conflicting claims are not identical, they are not patentably distinct from each other because copending App '007 teaches a molding undergoing method steps of pre-heating at a high temperature, retaining circular shape, and having the parting line portion of the resin molding heated, which reads on limitations of the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 8, 9, and 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The rejected claims contain the limitation “wherein the case where the resin molding is formed of...”. It is unclear whether the applicant is claiming that the resin must be either one of ABS or PC. The claims as written may also be interpreted in that if the resin is not ABS or PC, the heating temperature range need not be as claimed (i.e. conditional).

5. Claims 9, 15, and 16 are also rejected because the claims contain the limitation “PC/ABS”. It is unclear whether the punctuation “/” indicates “PC *or* ABS” -or- “PC *and* ABS”.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
8. Claims 1, 3-5, 8-9, and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa JP 01-256575 (abstract) in view of Kawagishi et al US 4940608.

Per claim 1, Ogawa teaches the method of creating a resin molding comprising of ABS resin or PC resin and another crystalline resin. Since prior art discloses using ABS or PC resin as the resin (same as applicant's disclosure), the resin molding would also be apt to undergo peeling of a thin surface resin film. Ogawa further teaches heat treating the mold. Ogawa fails to teach using the resin mold afterward in a resin plating step, but resin plating is widely used and commonly known to those skilled in the art. However, Kawagishi teaches the method of local electroless plating for plastics, in which the plastics product includes ABS resin, PC resin, or ABS/PC resin (col. 2, lines 20-29). It would have been obvious to one of ordinary skill to use the plating method taught by Kawagishi after the molding and heating method taught by Ogawa because plating of resins and plastics is widely performed in the art. The method taught by Kawagishi teaches a more efficient and applicable method of improved plating in both precision and appearance in forming the final product (col. 1, lines 35-45).

Per claims 5, 11, and 12, Ogawa teaches heat-treating the entire mold, thereby inherently heating all parts of the mold including a parting line portion of the resin molding. Per claims 8, 13, and 14, Ogawa teaches using ABS as the resin and that it would be ideal to heat the mold between the glass transition temperatures of the

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crystalline resin and the melting point of the thermoplastic resin. Since the melting point of ABS is roughly 105°C and the glass transition temperature is <100°C, the heat treatment temperature as disclosed meets the temperature range taught by applicant.

Per claims 3 and 4, since the same process with the same resin is disclosed by the prior art, and heat treated at a temperature within the disclosed temperature range, it would be inherent that the rubber particles (from ABS) retain a circular shape of 2:3 or less in terms of a size ratio in longitudinal and transverse directions. Per claims 9, 15, and 16, Ogawa teaches using a thermoplastic resin including ABS and PC.

Additionally, the resin mixture PC/ABS is a well-known mixture and it would be obvious to one of ordinary skill in light of Ogawa to have mixed ABS and PC, if desired. The melting point of PC is roughly 250-300°C and therefore, Ogawa teaches heat treatment at the claimed range.

9. Claims 1, 3-5, 8-9, and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kayano et al JP 07-118416.

Per claim 1, Kayano teaches the process of treating a molding, a surface treatment step which heats the surface in the range from room temperature to 350°C [0032]. Kayano further teaches that ABS is a useful additive resin in the composition [0041]. Any resin composition that is to undergo plating would be apt to undergo peeling of a thin surface, depending on the degree of adhesiveness to the metal or plating component. Kayano teaches preparing the mold for any subsequent process steps, including resin plating (hence the surface treatment to improve adhesion) [0001]

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and [0054]. Per claims 5, 11, and 12, Kayano teaches that one skilled in the art would be able to selectively perform said treatment on only the portion that needs surface refining [0035], or the whole surface if desired [0035], and thus would inherently heat the parting line portion of the resin molding. Per claims 8, 13, and 14, Kayano teaches using ABS as an additive in the resin composition and teaches the disclosed temperature range [0032]. Per claims 3 and 4, since the same process disclosed in claim 14 is met by the prior art, it would be inherent that the rubber particles (from ABS) would retain a circular shape of 2:3 or less in terms of a size ratio in longitudinal and transverse directions. Per claims 9, 15, and 16, although Kayano does not teach using a mixture of PC/ABS, a PC/ABS mixture is a commonly known and widely used resin and one of ordinary skill in the art would be able to determine the best mixture of resin for the desired outcome. The claimed temperature ranged is met by the prior art [0032].

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN LEONG whose telephone number is (571)270-5352. The examiner can normally be reached on Monday to Friday, 7:30am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571)272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NATHAN LEONG/  
Examiner, Art Unit 1792

/Timothy H Meeks/  
Supervisory Patent Examiner, Art Unit 1792